

**REMARKS**

This is a full and timely response to the Office Action mailed December 31, 2008 and Advisory Action mailed May 15, 2009, submitted concurrently with a Request for Continued Examination and a third month extension of time to extend the due date for response to June 30, 2009.

By this Amendment, claim 1 has been amended to incorporate the subject matter of claim 2. Further, new claims 10-13 have been added to further protect specific embodiments of the present invention. Thus, in view of the amendments to claim 1, claim 2 has been canceled without prejudice or disclaimer to its underlying subject matter, and claims 3 and 5 have been amended to depend on claim 1. Thus, claims 1, 3-5 and 7-13 are currently pending in this application. Support for the claim amendments and new claims can be readily found variously throughout the specification and the original claims, see, in particular, paragraphs [0051]-[0054] of the present Patent Application Publication 2007/0131805.

In view of these amendments, Applicant believes that all pending claims are in condition for allowance. Reexamination and reconsideration in light of the above amendments and the following remarks is respectfully requested.

**Obviousness-Type Double Patenting Rejection**

Claims 1-5 and 7-9 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as allegedly being unpatentable over the claims of copending U.S. Patent Application Nos. 10/588,437, 10/588,758, and 10/588,729. Applicant has previously submitted with the response filed April 30, 2009 Power of Attorneys executed by the individual assignees, namely Panasonic Electric Works, Ltd. and the Proctor & Gamble Company, to validate the terminal disclaimers previously filed on October 24, 2008 for U.S. Patent Application Nos. 10/588,437, 10/588,758, and 10/588,729. The Examiner has indicated in the Advisory Action dated May 15, 2009 that these rejections have been withdrawn.

**Rejections under 35 U.S.C. §103**

Claims 1, 2, 5, and 9 are rejected under 35 U.S.C. §103(a) as allegedly being unpatentable over Jeffries et al. (U.S. Patent No. 5,221,050) in view of Gaw et al. (U.S. Patent No. 6,318,647 B1) in further view of Valaskovic et al. (U.S. Patent No. 6,744,046 B2). Further, claims 3-4 are rejected under 35 U.S.C. §103(a) as allegedly being unpatentable over Jeffries et al. (U.S. Patent No. 5,221,050) in view of Gaw et al. (U.S. Patent No. 6,318,647 B1) and Valaskovic et al. (U.S. Patent No. 6,744,046 B2), and further in view of Westerweck et al. (U.S. Patent Application Publication No. 2004/0057720). Still further, claim 7 is rejected under 35 U.S.C. §103(a) as allegedly being unpatentable over Jeffries et al. (U.S. Patent No. 5,221,050) in view of Gaw et al. (U.S. Patent No. 6,318,647 B1) and Valaskovic et al. (U.S. Patent No. 6,744,046 B2), and further in view of Coffee et al. (U.S. Patent No. 6,595,208 B1). Lastly, claim 8 is rejected under 35 U.S.C. §103(a) as allegedly being unpatentable over Jeffries et al. (U.S. Patent No. 5,221,050) in view of Gaw et al. (U.S. Patent No. 6,318,647 B1) and Valaskovic et al. (U.S. Patent No. 6,744,046 B2), and further in view of Doeblner et al. (U.S. Patent Application Publication No. 2002/0100815). Applicant respectfully traverses these rejections.

To establish an obviousness rejection under 35 U.S.C. §103(a), four factual inquiries must be examined. The four factual inquiries include (a) determining the scope and contents of the prior art; (b) ascertaining the differences between the prior art and the claims in issue; (c) resolving the level of ordinary skill in the pertinent art; and (d) evaluating evidence of secondary consideration. *Graham v. John Deere*, 383 U.S. 1, 17-18 (1966). In view of these four factors, the analysis supporting a rejection under 35 U.S.C. 103(a) should be made explicit, and should "identify a reason that would have prompted a person of ordinary skill in the relevant field to combine the [prior art] elements" in the manner claimed. *KSR Int'l. Co. v. Teleflex, Inc.*, 127 S. Ct. 1727, 82 USPQ2d 1385, 1396 (2007). Further, the Federal Circuit has stated that "rejections on obviousness cannot be sustained with mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness." *In re Kahn*, 441 F.3d 977, 988, 78 USPQ2d 1329, 1336 (Fed. Cir. 2006). Finally, even if the prior art may be combined, there must be a reasonable expectation of success, and the reference or

references, when combined, must disclose or suggest all of the claim limitations. *See in re Vaack*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991).

Claim 1 recites, *inter alia*:

a dispensing unit comprising  
    a pump in immediate downstream relation with the  
    reservoir for supplying the liquid composition from the  
    reservoir, the pump being mechanically connected to said  
    actuator to be driven thereby,  
    an emitter electrode to electrostatically charge the liquid  
    composition, the emitter electrode being electrically connected  
    to said high voltage generator, and  
    a nozzle to dispense the liquid composition, the nozzle  
    being disposed at the point of dispense...  
a selector for providing a spraying mode and a dripping mode  
selectively in response to the switch being manipulated,  
wherein the dripping mode is such that said pump is alone actuated  
to dispense the liquid composition out through the nozzle absent  
electrical charge (emphasis added)

The prior art of record fails to teach or suggest at least these features of claim 1. The Examiner concedes that Jeffries et al. fails to teach these features (see pages 5-6 of the Office Action), and cites Valaskovic et al. to cure these deficiencies in Jeffries et al. However, Valaskovic et al. also fails to teach these features.

Valaskovic et al. discloses, "The most commonly encountered modes are shown in FIGS. 3 through 8 and are referred to as: dripping mode, spindle mode, pulsed cone-jet mode, cone-jet mode, and multi-jet mode. Each mode will generate a given distribution of droplet sizes, with each droplet carrying a distribution of electrical charge" (emphasis added) (see column 2, lines 60-65 of Valaskovic et al.). Valaskovic et al. further discloses, "Increasing the flow rate to 2  $\mu\text{L}/\text{min}$  resulted in an increase in the operating voltage. As the flow rate increased the droplets emitting from the tip became larger, creating a stream of droplets known as the "dripping or spindle mode" (see column 15, lines 40-44 of Valaskovic et al.). As such, Valaskovic et al. teaches that an electrical charge is constantly applied to the nozzle or the emitter electrode in the drip mode, as in the other modes. Therefore, the drip mode of Valaskovic et al. is completely different from the claimed dripping mode, which is absent electrical charge (i.e. "wherein the dripping mode is such

*that said pump is alone actuated to dispense the liquid composition out through the nozzle absent electrical charge".*

Further, while Valaskovic et al. teaches the basic concept of feedback controlled electropray, Valaskovic et al. fails to teach any actual components for realizing this concept. For example, Valaskovic et al. is silent as to how the pump is mechanically connected to the actuator to be driven thereby, and how the selector is configured for selection between the spraying mode and the dripping mode. Thus, because of the limited teachings of Valaskovic et al., it is unclear how Jeffries et al. could be modified in view of Valaskovic et al. to arrive at the claimed invention.

In addition, the purpose of the claimed dripping mode is to confirm the supply of liquid from the reservoir to the nozzle when the dispensing unit includes all of the claimed pump, emitter electrode, and nozzle. In contrast, neither Jeffries et al. nor Valaskovic et al. teaches a dispensing unit composed of all of the claimed pump, emitter electrode, and nozzle. As such, one of ordinary skill in the art would not have been motivated to modify the prior art to have the claimed dripping mode because the problem sought to be solved by the claimed dripping mode is not present in the dispensing units of the prior art.

None of Gaw et al., Coffee et al., and Doeblner et al. cures the deficiencies of Jeffries et al. and Valaskovic et al. noted above.

Accordingly, Applicant respectfully requests withdrawal of the 35 U.S.C. §103(a) rejection of claim 1. Claims 2-5 and 7-9 depend directly or indirectly from claim 1 and are allowable at least for this reason. Since none of the other prior art of record, whether taken alone or in any combination, discloses or suggests all the features of the claimed invention, Applicant respectfully submits that independent claim 1, and all the claims that depend therefrom, are allowable.

### **New Claims**

New claims 10-13 are directed to additional aspects of the present invention that are not disclosed or suggested by the prior art of record. More specifically, new claims 10-12 have been presented to more particularly define the dispensing unit and pump. In new independent claim 10, the dispensing unit (220) is connected to the reservoir (210) to form a removable cartridge (200)

detachable to the housing (10) that incorporates an electric motor (30) for rotating the actuator (36), the high voltage source (40), the switch (60), and the selector (70), said actuator (36) coming into engagement with the pump (230) when said cartridge is attached to the housing for enabling the operation of the pump. In addition, in new claim 11, the pump has a plug (232) for detachable connection with the reservoir (210). Further, in new claim 12, the pump (230) is a gear pump which has a pump chamber with a flat base (231) molded from a plastic material, gears (234) in the pump chamber, and a metal plate (270) mounted in the flat base (231), said metal plate (270) formed with a pin (254) for detachable electrical connection with a voltage terminal (176) provided on the side of the housing (10) to relay the high voltage to the emitter electrode (250). The emitter electrode (250) and the metal plate (270) are cooperative to charge the liquid composition within the pump chamber. With regard to new claims 10-12, the Examiner is requested to direct his attention to paragraphs [0051]-[0053] of the present Patent Application Publication No. 2007/0131805 A1 and particularly, the effect of avoiding undesired current flow within the liquid composition in the pump).

Lastly, new claim 13 has been presented to more particularly define the housing as having a shape of a generally flat disc. It should also be noted that new claims 13 depends from claim 1 and includes all of the features of claim 1, which is allowable for the reasons noted above. Therefore, in view of such dependency, it is respectfully submitted that 13 is also allowable at least for the reason that independent claim 1 is allowable, as well as for the features it recites.

### CONCLUSION

For the foregoing reasons, all the claims now pending in the present application are believed to be clearly patentable over the outstanding rejections. Accordingly, favorable reconsideration of the claims in light of the above remarks is courteously solicited. If the Examiner has any comments or suggestions that could place this application in even better form, the Examiner is requested to telephone the undersigned attorney at the below-listed number.

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Respectfully submitted,

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